

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A hinge apparatus of a drum for a clothing dryer comprising:

a front hinge portion formed between a front of a case and a front of a drum, and for rotatably supporting the front of the drum; and

a rear hinge portion installed between a rear of the case and a rear of the drum, and for supporting so that the rear of the drum swings in vertical and horizontal directions, comprising:

a housing fixed at the center of the rear drum;

a ball bearing inserted at the housing; and

a shaft extending entirely through the ball bearing.

2. (Canceled)

3. (Currently Amended) The apparatus of claim 2 1, wherein the housing ~~consists of~~ includes a first housing and a second housing which are fixed at the rear of the case, and when the first housing and the second housing are assembled, a spherical groove in which the ball bearing is swingably inserted is formed.

4. (Currently Amended) The apparatus of claim 3, wherein the first housing comprises:

a first engaging portion having a bolt hole fixed at the rear surface of the drum and a bolt engaging hole bolt-engaged with the second housing, said bolt hole and the bolt engaging hole being formed in a circumferential direction; and

a first hinge portion integrally formed at the center of the first engaging portion, and having a hemispherical groove in which the ball bearing is inserted.

5. (Original) The apparatus of claim 3, wherein the second housing comprises:

a second engaging portion having a plurality of bolt holes which is bolt-engaged with the first engaging portion; and

a second hinge portion having a hemispherical groove in which the ball bearing is inserted, and a penetrating hole through which the shaft passes.

6. (Currently Amended) The apparatus of claim 2 1, wherein one end of the shaft is fixed at the ball bearing, and the other end of the shaft has a spiral formed portion so as to be bolt-engaged with the case while providing an empty gap between the second housing and the case.

7. (Original) The apparatus of claim 6, wherein a base nut which is screw-engaged with the shaft is provided at an inner surface of the case.

8. (Currently Amended) ~~The apparatus of claim 6;~~

A hinge apparatus of a drum for a clothing dryer comprising:
a front hinge portion formed between a front of a case and a front of a
drum, and for rotatably supporting the front of the drum; and
a rear hinge portion installed between a rear of the case and a rear of the
drum, and for supporting so that the rear of the drum swings in vertical and
horizontal directions, the rear hinge portion having a shaft connected with a ball
bearing and fixed at the rear of the case, wherein one end of the shaft is fixed at
the ball bearing, and the other end of the shaft has a spiral formed portion so as
to be bolt-engaged with the case;

~~the a base nut has having a disc shape installed at a nut-installed portion~~
~~formed at the case[[],]; and~~

a plurality of engaging protrusions is formed at a certain interval
therebetween in a circumferential direction of the base nut.

9. (Original) The apparatus of claim 8, wherein a reinforcing member for reinforcing stiffness of the case when the shaft is engaged therewith is mounted at an outer surface of the case.

10. (Previously Presented) The apparatus of claim 9, wherein a stopping pin is formed at the reinforcing member, is inserted in an insertion groove formed at the case, and is protruded to the nut installed portion, so that the stopping pin stops a stopping protrusion.

11. (Previously Presented) The apparatus of claim 9, wherein the reinforcing member is fixed to the case by a weld or a rivet.

12. (New) A hinge apparatus of a drum for a clothing dryer, comprising:

a housing fixed at a rear center portion of a drum;

a ball bearing inserted into the housing;

a shaft connected with the ball bearing and fixed at a rear portion of a case; and

a shaft fixing unit to fix the shaft position in assembly of the hinge apparatus.

13. (New) The apparatus of claim 12, wherein the shaft fixing unit comprises:

a base nut member screw-engaged with the shaft, installed at an inner surface of the case and having a plurality of engaging protrusions formed with a certain interval therebetween in a circumferential direction thereof; and

a reinforcing member mounted at an outer surface of the case for reinforcing stiffness of the case when the shaft is engaged therewith and having a stopping pin to stop the engaging protrusions in assembly of the hinge apparatus.

14. (New) The apparatus of claim 13, wherein the base nut member has a disc shape and is installed at a nut-installed portion formed at a center portion of the case.

15. (New) The apparatus of claim 13, wherein the stopping pin is inserted into an insertion groove formed at the case, and is protruded to a nut installed portion so as to stop the engaging protrusions by the stopping pin.

16. (New) A hinge apparatus of a drum for a clothing dryer, comprising:

a housing fixed at a rear center portion of a drum;

a ball bearing inserted into the housing;
a shaft connected with the ball bearing and fixed at a rear of a case; and
a shaft fixing unit to fix the shaft position in assembly of the hinge apparatus.

17. (New) The apparatus of claim 16, wherein the shaft fixing unit comprises:

a base nut member screw-engaged with the shaft, installed at an inner surface of the case and having a plurality of engaging protrusions formed with a certain interval therebetween in a circumferential direction thereof; and

a stopping pin provided so as to stop the engaging protrusions in assembly of the hinge apparatus.

18. (New) The apparatus of claim 16, wherein a reinforcing member is mounted at an outer surface of the case and the stopping pin is formed at the reinforcing member for reinforcing stiffness of the case when the shaft is engaged therewith.

19. (New) The apparatus of claim 17, wherein the base nut member has a disc shape and is installed at a nut-installed portion formed at a center portion of the case.

20. (New) The apparatus of claim 16, wherein the stopping pin is inserted into an insertion groove formed at the case and is protruded to the nut installed portion so as to stop the engaging protrusions by the stopping pin.

21. (New) The apparatus of claim 18, wherein the reinforcing member is fixed to the case by a weld or a rivet.

22. (New) A method for fabricating a hinge apparatus for a drum of a clothing dryer, comprising:

forming a first housing having a first hinge portion at a center thereof;

forming a second housing having a second hinge portion at a center thereof so as to couple to the first housing;

forming a shaft at a center portion of a ball bearing;

fixing the first housing to a rear center portion of the drum;

inserting the ball bearing into the first hinge portion of the first housing and then coupling the second housing to the first housing, so that the ball bearing can be rotated in a space formed as the first housing and the second housing are coupled to each other;

coupling a shaft fixing member to a spiral-formed portion provided at the end of the shaft, and inserting the end of the shaft into the case so as to fix the shaft into the case;

stopping the shaft fixing member; and

coupling a nut to the end portion of the shaft, whereby rotation of the shaft is prevented by the shaft fixing member.

23. (New) The method of claim 22, wherein in the step of forming the first housing, a semi-sphere groove is formed in the first hinge portion.

24. (New) The method of claim 22, wherein in the step of forming the second housing, a semi-sphere groove is formed in the second hinge portion.

25. (New) The method of claim 22, wherein in the step of preventing rotation of the shaft fixing member, a reinforcing member is coupled to the end portion of the shaft from an outer side of the case.

26. (New) The method of claim 25, wherein a stopping pin is formed at the reinforcing member, the stopping pin is inserted into an engaging groove formed at the case, and engaging protrusions formed at the shaft fixing member are stopped by the stopping pin in assembly.

27. (New) The method of claim 26, wherein the stopping pin of the reinforcing member is curvedly extending from an outer circumferential surface

of the reinforcing member.

28. (New) The method of claim 25, wherein the shaft fixing member is contacted with an inner surface of the case and the reinforcing member is contacted with an outer surface of the case.